

# IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

On page 2, please replace the paragraph starting on line 3 with the following paragraph:

The present invention is directed to a novel method and apparatus for a method for reducing power consumption of a decoder in a communication system. Accordingly, in one aspect of the invention, a quality metric of a segment of a received signal is estimated. Then, a quality metric threshold is determined and an interval in accordance with a modified quality metric threshold is delimited. If the estimated quality metric is outside of the interval, the segment is decoded.

On page 2, please replace the paragraph starting on line 33 with the following paragraph:

**FIG. 4** illustrates a conceptual forward link structure in accordance with another embodiment of the invention[[.]] ; and

On page 3, please replace the paragraph starting on line 1 with the following paragraph:

**FIG. 1** illustrates an exemplary communication system **100** capable of implementing embodiments of the invention. A transmitting station (TS) **102** transmits signals to a receiving station (RS) **104** over a forward link [[**106a**]] **106A**. Because the signals transmitted from the TS **102** contain user data, the forward link must comprise at least a traffic channel. The TS **102** receives signals from the RS **104** over a reverse link [[**106b**]] **106B**. Because the signals transmitted from the RS **104** do not need to contain user data, the reverse link need not comprise a traffic channel. If a two-way user data communication is desired, both the forward link [[**106a**]] **106A** and the reverse link [[**106b**]] **106B** must comprise traffic channels. For simplicity, the communication system **100** is shown to include only two stations. Such a system can represent, e.g., two computers communicating with each other. However, other variations and configurations of the communication system **100** are possible. In a multi-user, multiple-

access communication system, single TS may be used to concurrently or sequentially transmit data to and receive data from a number of RSs.

On page 3, please replace the paragraph starting on line 31 with the following paragraph:

The communication system **100** may carry voice and/or data. Examples comprise communication systems conforms to the "3rd Generation Partnership Project" (3GPP) and embodied in a set of documents including Document Nos. 3G TS 25.211, 3G TS 25.212, 3G TS 25.213, and 3G TS 25.214 (the W-CDMA standard), or "TR-45.5 Physical Layer Standard for cdma2000 Spread Spectrum Systems" (the IS-2000 standard). Another example of a communication system carrying both voice and data is a system in accordance with the IS-95 standard, which specifies transmitting traffic data and voice data over the forward and reverse links. A method for transmitting traffic data in code channel frames of fixed size is described in detail in U.S. Patent No. 5,504,773, entitled "METHOD AND APPARATUS FOR THE FORMATTING OF DATA FOR ~~TRANSMISSION~~, TRANSMISSION," assigned to the assignee of the present invention and incorporated by reference herein. In accordance with the IS-95 standard, the traffic data or voice data is partitioned into code channel frames that are 20 milliseconds wide with data rates as high as 14.4 Kbps.

On page 4, please replace the paragraph starting on line 7 with the following paragraph:

An example of a data only system is a high data rate (HDR) system, such as a system disclosed in ~~co-pending~~ application serial number 08/963,386, entitled "METHOD and apparatus FOR HIGH RATE PACKET DATA transmission," filed 11/3/1997, now U.S. Patent No. 6,574,211, issued 6/3/2003, assigned to the assignee of the present invention and incorporated by reference herein.

On page 4, please replace the paragraph starting on line 12 with the following paragraph:

The forward link ~~[[106a]]~~ **106A** and the reverse link ~~[[106b]]~~ **106B** can propagate through a guiding media, e.g., a wire, a coaxial cable, an optical cable or other media known to one skilled in the art, or in case of wireless link through free space.

On page 4, please replace the paragraph starting on line 15 with the following paragraph:

The communication system 100 may employ variable data rate transmission on the forward link ~~[[106a]]~~ 106A. Such a system, disclosed in ~~co-pending~~ application serial number 08/963,386, defines a set of data rates, ranging from 38.4 kbps to 2.4 Mbps, at which an access point (e.g., TS 102) may send data packets to an access terminal (e.g., RS 104). In one embodiment, the data rate is determined by a data rate selection method at the RS 104, and a scheduler method at the TS 102. Although the data rate determination is described in terms of the data rate selection method and the scheduler method, one of ordinary skill in the art will understand that this is for illustration only, and any data rate determination method can be used.

On page 4, please replace the paragraph starting on line 31 with the following paragraph:

In one embodiment, each TS in the communication system 100 transmits known signal, called a pilot signal, at well-defined, periodic intervals. The RS 104 monitors the pilot signals received from the TSs in the RS 104 active set, and utilizes the pilot signals to determine a quality metric associated with each TS. In one embodiment, the quality metric is a ~~signal-to-noise~~ signal-to-interference-plus-noise ratio (SINR). For the purposes of this description, an active set is a list of pilot signals selected by the particular RS from all pilot signals received with sufficient strength to indicate that the associated forward traffic channel can be successfully demodulated. Based on the SINR information over past signal segments from each of the TSs in the RS 104 active set, the RS 104 predicts the SINR over future signal segment(s) for each of the TSs in the RS 104 active set. In one embodiment, the signal segment is a slot. An exemplary prediction method is disclosed in ~~co-pending~~ application serial number 09/394,980, entitled "SYSTEM AND METHOD FOR ACCURATELY PREDICTING SIGNAL TO INTERFERENCE AND NOISE RATIO TO IMPROVE COMMUNICATIONS SYSTEM PERFORMANCE," now U.S. Patent No. 6,426,971, issued 7/3/2002, assigned to the assignee of the present invention and incorporated herein by reference. The RS 104 then selects the TS (e.g., TS 102), which offers the best throughput over the future slot(s), and estimates the highest data rate at which the RS 104 can receive the next packet from the TS 102. The RS 104 then sends a

data rate request (DRC) to the TS **102**, indicating the data rate at which the RS **104** wishes to receive the next packet.

On page 5, please replace the paragraph starting on line 28 with the following paragraph:

The data rate, requested by the RS **104** via a DRC from the TS ~~[[104]]~~ **102**, is determined using the rate control method, which predicts a SINR over future slot(s) based on the SINR over past slot(s) from the TS **102**. The SINR from the TS **102** is subject to rapid, unpredictable changes due to the variations in the channel. Such variations include ~~signal-to-noise ratio~~ SINR changes, fading, time variance, and other changes known to one skilled in the art. Because these variations are different for different communication channels, transmission of a signal over a wireless communication channel requires different considerations than transmission of a signal over a wire-like communication channel, e.g., coaxial cable, optical cable, and other types known to one skilled in the art. One of the factors affecting the communication channel characteristics in wireless communication systems is inter-cell interference. Such interference levels may be significantly higher during the data transmission than the interference level seen during the pilot transmission, because some of the base stations may remain idle during the data period. Consequently, it is not always possible for the RS **104** to predict the SINR with great accuracy. Therefore, the rate control method establishes a lower bound on the actual SINR during the next packet duration with high probability, and determines the maximum data rate that can be sustained if the actual SINR is equal to this lower bound. In other words, the rate control method provides a conservative measure of the rate data at which the next packet can be received.

On page 9, please replace the paragraph starting on line 26 with the following paragraph:

In another embodiment of the invention, when the RS **104** decides to attempt packet decoding, the iterative decoding procedure is carried out for at least a minimum number of iterations  $N_{\min}$ , and at most a maximum number of iterations  $N_{\max}$ . In one embodiment,  $N_{\min}$  and  $N_{\max}$  are determined in accordance with simulations or controlled tests of demodulator performance under various channel conditions. After the first  $N_{\min}$  iterations, a quality metric of the decoded payload is computed, and compared to a quality metric contained in the decoded packet. In one embodiment, the quality metric is a cyclic redundancy check (CRC). If the two

CRCs are equal, then the CRC is said to be valid. If the CRC is valid, decoding for a successive iteration is carried out and a CRC of a decoded payload is computed, and compared to a CRC contained in the decoded packet. If the CRCs computed after two successive iterations are identical and valid, then the decoding is deemed to be successful, and terminated. If the CRCs computed after two successive iterations are not identical or not valid, decoding for additional  $m$  iterations is carried out and the test is repeated. In any case, decoding is terminated after  $N_{\max}$  iterations. After the first  $N_{\max}$  iterations, a CRC of the decoded payload is computed, and compared to a CRC contained in the decoded packet. If the two CRCs are equal, then the packet is declared successfully decoded. The above-described method is disclosed in ~~co-pending~~ application serial number 09/350,941, entitled "EFFICIENT ITERATIVE DECODING," filed July 9, 1999, now U.S. Patent No. 6,182,261, issued 1/30/2001, assigned to the assignee of the present invention, and incorporated herein by reference.